

AD-A117 126 ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS-ETC F/S 4/2
19318A MLRS, MISSILE NUMBERS BN-107, BN-102, BN-103, ROUND NUMB--ETC(U)
JUN 82 D C KELLER
UNCLASSIFIED ERADCOM/ASL-DR-1245 NL

AD A117126

UNCLASSIFIED

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INTRODUCTION

19318A MLRS, Missile Numbers BN-107, BN-102, and BN-103, Round Numbers V-265/PQ-5, V-266/PQ-6, and V-267/PQ-7, were launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1400, 1400:05, and 1400:10 MDT, 02 Jun 1982. The scheduled launch times were 1400, 1400:04.5, and 1400:09 MDT.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from pilot-balloon observations at :

SITE AND ALTITUDE

WSD 2000 meters
DON 1150 meters

(2) Air structure data (rawinsonde) were collected at the following Met Site:

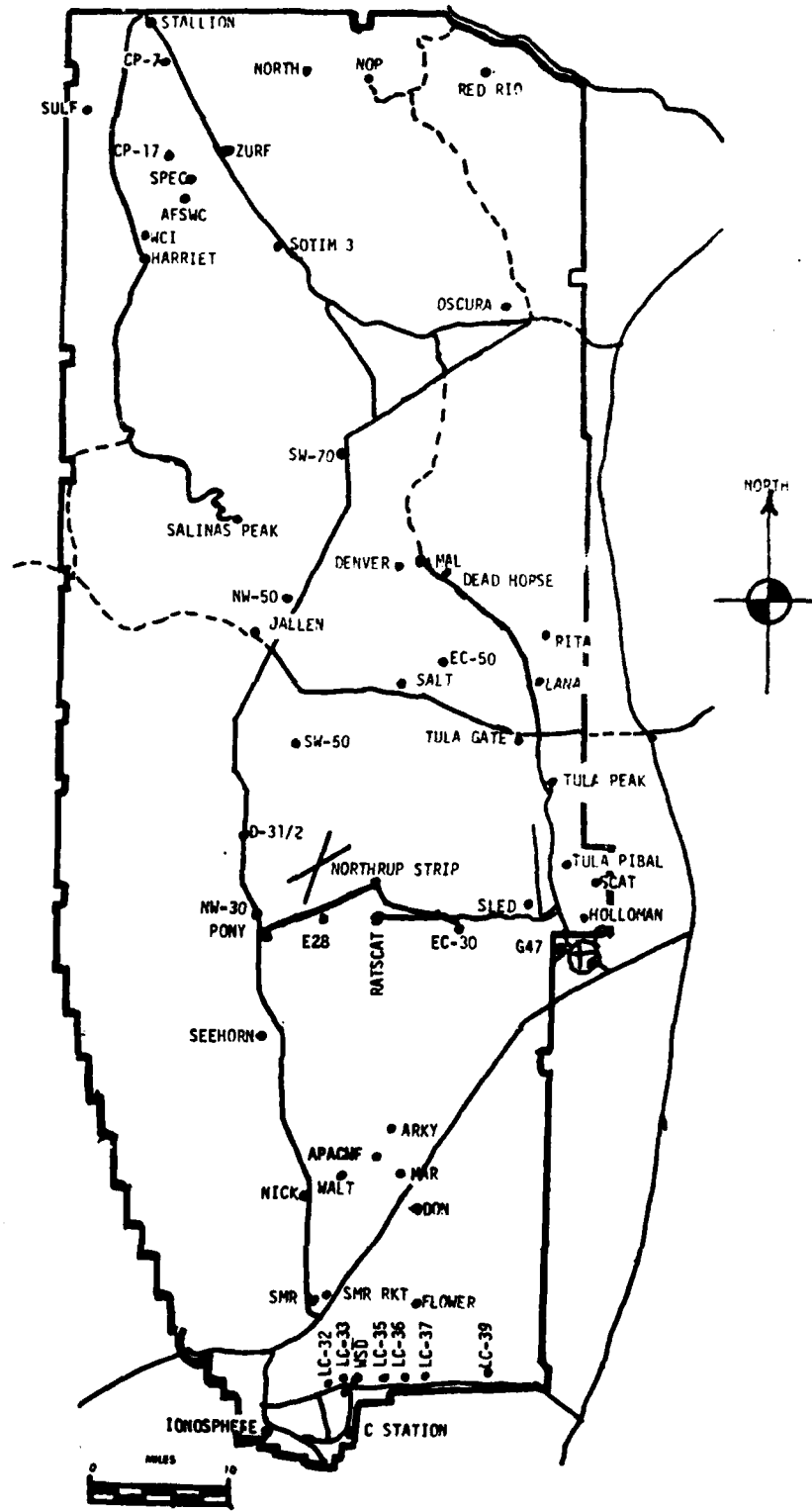
SITE AND TIME

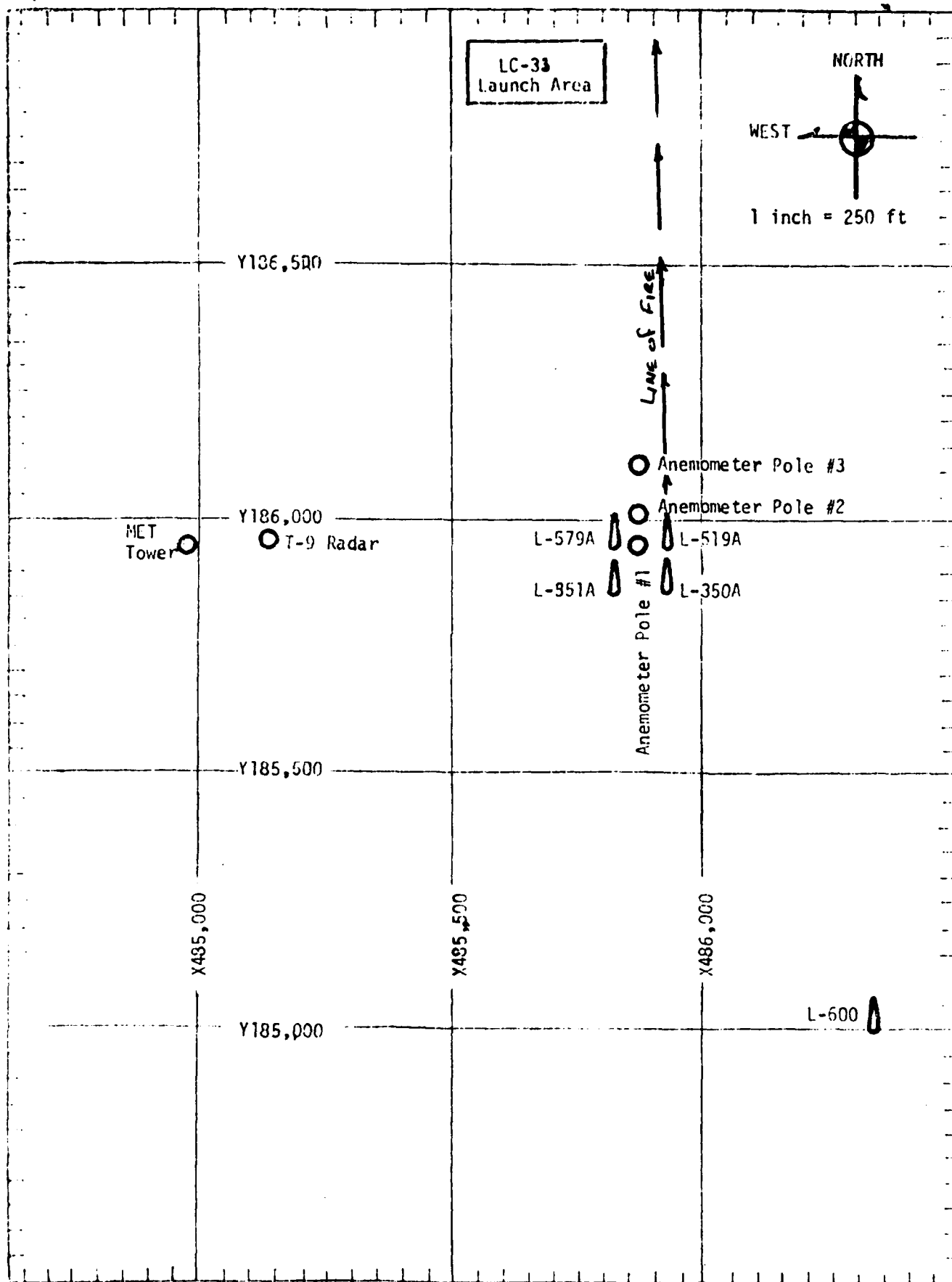
WSD 1100 MDT
LC-37 1208 MDT
WSD 1240 MDT
LC-37 1440 MDT



Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By _____	
Distribution/	
Availability Codes	
Avail and/or	
Dist	Special
A	

WSMR METEOROLOGICAL SITES





LC-33

[illegible]

OBSTRUCTIONS TO VISIBILITY	CLOUDS						REMARKS
	1st LAYER		2nd LAYER		3rd LAYER		
	AMT	TYPE	AMT	TYPE	AMT	TYPE	
	1	CI	25,000				

PSYCHROMETRIC COMPUTATION		
TIME: MDT	1400	
DRY BULB TEMP.	33.0	
WET BULB TEMP.	13.2	
WET BULB DEPR.	19.8	
DEW POINT	-5.8	
RELATIVE HUMID.	8%	

TABLE 2 LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1 X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL			POLE #2 X485,874.29 Y186,012.00 H4033.57 53.0 ft. AGL			POLE #3 X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
-30	207	12	-30	232	12	-30	244	15
-20	212	12	-20	228	13	-20	243	14
-10	212	10	-10	231	10	-10	234	13
0.0	207	10	0.0	242	13	0.0	243	16
+10	194	12	+10	250	12	+10	258	15

TABLE 3 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #2, 62 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
-30	242	10	-30	242	14
-20	243	10	-20	245	12
-10	253	08	-10	244	10
0.0	245	09	0.0	231	10
+10	240	07	+10	233	10

LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #4, 202 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
-30	231	14	-30	240	11
-20	234	11	-20	240	11
-10	228	10	-10	229	11
0.0	228	10	0.0	231	10
+10	223	10	+10	229	10

I-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 02 June 1982

SITE: WSD
 TIME: 1400 MDT
 WSTM COORDINATES:
 X= 488,580.00
 Y= 185,045.00
 H= 3,989.00

SITE: DON
 TIME 1400 MDT
 WSTM COORDINATES:
 X=511,988.37
 Y=247,396.36
 H= 3,996.83

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	260	12
150	241	13
210	238	14
270	234	09
330	249	11
390	251	12
500	244	12
650	265	11
800	273	09
950	251	09
1150	244	12
1350	243	12
1550	237	09
1750	250	09
2000	244	09

Data obtained from NIKE-HERC
 Radar Tracked pilot-balloon
 observation.

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	300	04
150	285	07
210	282	09
270	280	10
330	278	12
390	275	14
500	269	17
650	266	20
800	268	17
950	264	13
1150	245	14
1350		
1550		
1750		
2000		

Data obtained from RAPTS T-9
 Radar Tracked pilot-balloon
 observation.

TABLE 5

AIMING AND T-TIME COMPUTER MET MESSAGES
02 June 1982

WSD 1100 MDT

METCM1324064

021700122876

00480008 30350876

01498010 29930866

02527009 29650841

03516014 29210803

04524009 28760757

05512016 28490713

06509030 28190672

LC-37 1208 MDT

METCM1324063

021810124874

00427004 30160874

01514012 29950864

02520009 29650838

03493010 29260801

04515009 28820756

05504018 28430712

06511030 28260670

WSD 1240 MDT

METCM1324064

021860122876

00427008 30320876

01488008 30090866

02520010 29900842

03516011 29550804

04490009 29020758

05489016 28500715

06502027 28220673

LC-37 1440 MDT

METCM1324063

022060124872

00373006 30650872

01434012 30460862

02490013 30090838

03472012 29680801

04470014 29180756

05466014 28720713

06492017 28380671

STATION ALTITUDE 3989.00 FEET MSL
2 JUNE 62 1100 MDT
ASCENSION NO. 247

SIGNIFICANT LEVEL DATA
153002047
WHITE SANDS

GEODESIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE-6

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEWPOINT		REL. HUMIDITY PERCENT
		DEGREES	CENTIGRADE	
875.5	3989.0	29.7	-5.4	10.0
868.1	4234.8	24.8	-1.9	17.0
850.0	4838.8	23.7	-3.0	16.0
786.5	7033.3	16.5	-7.9	18.0
739.1	8756.3	12.5	-11.1	18.0
721.5	9419.4	12.3	-12.8	16.0
700.0	10248.6	10.4	-14.3	16.0
677.9	11122.0	8.5	-15.8	16.0
652.1	12173.3	7.6	-16.6	16.0
618.7	13586.4	4.0	-19.5	16.0
602.1	14312.8	4.1	-19.4	16.0
545.3	16933.7	-1.4	-23.9	16.0
521.7	18066.3	-4.2	-26.2	16.0
500.0	19186.4	-4.7	-26.6	16.0
483.7	20042.6	-5.6	-22.9	24.0
425.3	23305.8	-14.6	-26.9	34.0
411.3	24137.1	-16.6	-26.2	43.0
400.0	24823.8	-18.5	-23.8	65.0
390.7	25400.8	-19.2	-20.1	54.0
370.5	26695.6	-21.3	-31.8	38.0
357.5	27560.5	-22.8	-34.6	33.0
300.0	31711.5	-32.6	-44.5	29.0

STATION ALTITUDE 3989.00 FEET MSL
2 JUNE 82
ASCENSION NO. 247

UPPER AIR DATA
1530020247
WHITE SANDS
TABLE-7

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
3989.0	875.5	29.7	-5.1	10.0	1005.3	670.0	270.0	8.0	1.000241
4000.0	875.2	29.5	-4.9	10.3	1005.6	670.3	270.2	8.0	1.000242
4500.0	860.1	24.3	-2.6	16.6	1005.0	672.7	277.7	8.8	1.000246
5000.0	845.2	23.2	-3.9	16.1	991.6	671.3	283.9	9.8	1.000241
5500.0	830.3	21.5	-4.8	16.6	979.7	669.4	288.8	10.8	1.000237
6000.0	815.8	19.9	-5.8	17.1	968.0	667.5	292.9	12.0	1.000233
6500.0	801.5	18.2	-6.8	17.5	956.5	665.6	293.3	12.3	1.000229
7000.0	787.4	16.6	-7.8	18.0	945.1	663.7	291.0	12.1	1.000226
7500.0	773.4	15.4	-8.8	18.0	932.2	662.3	291.7	11.1	1.000222
8000.0	759.5	14.3	-9.7	18.0	919.3	660.9	293.4	9.5	1.000218
8500.0	740.0	13.1	-10.7	18.0	906.6	659.6	292.2	10.4	1.000215
9000.0	732.6	12.4	-11.7	17.3	892.5	658.8	290.4	12.1	1.000210
9500.0	719.4	12.1	-12.9	16.0	877.5	658.4	288.6	15.6	1.000206
10000.0	700.4	11.0	-13.8	16.0	865.1	657.0	287.3	19.3	1.000203
10500.0	693.6	9.9	-14.7	16.0	852.8	655.7	286.9	22.9	1.000199
11000.0	680.9	8.8	-15.6	16.0	840.6	654.4	286.4	26.5	1.000196
11500.0	669.5	8.2	-16.1	16.0	827.0	653.0	286.0	28.8	1.000193
12000.0	650.3	7.7	-16.5	16.0	813.1	653.3	285.0	30.2	1.000189
12500.0	644.2	6.8	-17.2	16.0	801.0	652.1	284.7	31.4	1.000186
13000.0	632.3	5.5	-18.3	16.0	789.9	650.6	282.0	31.8	1.000183
13500.0	620.7	4.2	-19.3	16.0	776.9	649.1	279.3	32.1	1.000180
14000.0	609.2	4.1	-19.5	16.0	765.0	648.9	275.8	31.7	1.000177
14500.0	597.9	3.7	-19.7	16.0	751.7	648.5	273.2	31.4	1.000174
15000.0	586.7	2.7	-20.6	16.0	740.4	647.2	271.7	31.1	1.000171
15500.0	575.7	1.6	-21.5	16.0	729.4	646.0	270.9	32.6	1.000168
16000.0	564.9	.6	-22.3	16.0	718.3	644.7	270.0	33.4	1.000165
16500.0	554.3	-.5	-23.2	16.0	707.8	643.5	268.9	32.9	1.000162
17000.0	543.9	-1.6	-24.0	16.0	697.3	642.2	268.0	34.9	1.000160
17500.0	533.6	-2.8	-25.0	16.0	687.1	640.8	267.3	38.0	1.000157
18000.0	523.4	-4.0	-26.0	16.0	677.1	639.3	266.3	42.4	1.000155
18500.0	513.4	-4.4	-26.4	16.0	665.2	638.8	269.3	47.0	1.000152
19000.0	503.6	-4.6	-26.5	16.0	653.0	638.6	269.6	49.7	1.000149
19500.0	494.0	-5.0	-25.1	18.9	641.4	636.1	269.0	52.3	1.000147
20000.0	484.5	-5.6	-23.0	23.6	630.3	637.5	270.2	54.3	1.000145
20500.0	475.1	-6.9	-23.3	25.4	621.0	636.0	270.5	56.2	1.000143
21000.0	465.8	-8.2	-23.9	26.9	612.1	634.3	270.3	57.2	1.000141
21500.0	450.7	-9.6	-24.5	28.5	603.3	632.6	270.1	58.4	1.000139
22000.0	447.8	-11.0	-25.1	30.0	594.6	631.0	268.4	60.6	1.000137
22500.0	439.0	-12.4	-25.8	31.5	586.1	629.3	267.4	62.6	1.000135
23000.0	430.5	-13.8	-26.5	33.1	577.8	627.6	268.0	64.3	1.000133

UPPER AIR DATA
1530020247
WHITE SANDS
TABLE-7 cont'd

STATION ALTITUDE 3989.00 FEET MSL
2 JUNE 62 1100 MDT
ASCENSION NO. 247

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LONG DEG

TABLE-7 cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM./CUBIC METER	SPEED OF SOUND M/SEC	WIND DATA DIRECTION DEGREES (IN)	SPEED KNOTS	INDEX OF REFRACTION
23500.0	422.0	-15.1	36.1	569.3	620.0	270.0	65.3	1.000131
24000.0	413.6	-16.3	41.5	560.5	624.6	270.0	62.1	1.000129
24500.0	405.3	-17.6	53.6	552.1	623.0	271.0	59.2	1.000128
25000.0	397.1	-18.7	60.3	543.3	621.7	272.0	58.9	1.000126
25500.0	389.1	-19.4	52.8	533.6	620.8	273.7	58.5	1.000123
26000.0	381.2	-20.2	46.6	524.7	619.8	274.0	61.7	1.000120
26500.0	373.5	-21.0	40.4	515.7	618.8	275.4	65.0	1.000118
27000.0	365.9	-21.8	36.2	506.9	617.7	276.1	64.7	1.000115
27500.0	358.4	-22.7	33.3	498.3	616.6	276.8	64.3	1.000113
28000.0	350.9	-23.8	32.6	490.2	615.2	277.3	63.0	1.000111
28500.0	343.6	-25.0	32.1	482.2	613.8	277.7	61.9	1.000109
29000.0	336.4	-26.2	31.6	474.4	612.3	277.6	61.8	1.000107
29500.0	329.4	-27.4	31.1	466.8	610.8	277.5	63.1	1.000105
30000.0	322.5	-28.6	30.6	459.2	609.3	277.5	65.5	1.000103
30500.0	315.8	-29.7	30.2	451.8	607.9			1.000102
31000.0	309.2	-30.9	29.7	444.5	606.4			1.000100
31500.0	302.7	-32.1	29.2	437.4	604.9			1.000098

STATION ALTITUDE 3489.00 FEET MSL
 2 JUNE 62
 ASCENSION NO. 247 1100 MDT

MANDATORY LEVELS
 1530020247
 WHITE SANDS

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

TABLE-8

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES	DEWPOINT CENTIGRADE	REL. HUM. PERCENT	WIND DATA	
					DIRECTION DEGREES (TN)	SPEED KNOTS
850.0	4835.	23.7	-3.6	10.	282.0	9.5
800.0	6552.	18.1	-6.9	10.	293.2	12.3
750.0	8345.	13.4	-10.4	18.	292.9	9.9
700.0	10238.	10.4	-14.3	16.	287.1	21.1
650.0	12247.	7.4	-16.8	16.	285.4	31.0
600.0	14389.	3.9	-19.6	16.	273.5	31.5
550.0	16687.	-0.9	-23.5	10.	268.4	33.0
500.0	19159.	-4.7	-26.6	16.	269.0	50.6
450.0	21854.	-10.7	-24.9	30.	268.8	60.0
400.0	24782.	-18.5	-23.8	63.	272.2	59.0
350.0	28020.	-24.0	-35.8	33.	277.4	62.9
300.0	31648.	-32.6	-44.5	29.		

STATION ALTITUDE 4051.37 FEET MSL
2 JUNE 62 1208 MDT
ASCENSION NO. 53

SIGNIFICANT LEVEL DATA
1030100000
LC-37

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

TABLE-9

PRESSURE	GEOMETRIC	TEMPERATURE	RELATIVE
HILLIBARS	ALTITUDE	AIR DEWPOINT	HUMIDITY
MSL FEET		DEGREES CENTIGRADE	PERCENT
673.6	4051.4	27.8	10.0
661.7	4447.2	25.0	14.0
650.0	4839.3	23.9	14.0
778.8	7313.0	16.7	15.0
709.0	9906.0	10.3	14.0
700.0	10254.6	9.9	14.0
680.4	11029.2	10.1	13.0
653.1	12142.3	7.9	13.0
635.1	12898.9	7.8	13.0

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

UPPER AIR DATA
1530100050
LC-37

TABLE-10

STATION ALTITUDE 4051.37 FEET MSL
2 JUNE 82
ASCENSION NO. 53 1208 MDT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND M/S	WIND DATA DIRECTION SPEED KNOTS	INDEX OF REFRACTION
4051.4	875.6	27.8	10.0	1009.6	676.4	240.0	1.000241
4500.0	860.1	24.9	14.0	1003.5	673.2	263.2	1.000242
5000.0	845.2	23.4	14.1	991.0	671.5	277.8	1.000238
5500.0	830.4	22.0	14.3	978.5	669.8	285.9	1.000234
6000.0	815.8	20.5	14.5	966.2	668.2	281.0	1.000231
6500.0	801.5	19.1	14.7	954.1	666.5	275.1	1.000227
7000.0	787.5	17.6	14.9	942.1	664.8	278.0	1.000223
7500.0	773.5	16.2	14.9	929.9	663.2	283.0	1.000220
8000.0	759.7	15.0	14.7	917.3	661.7	289.6	1.000216
8500.0	746.0	13.8	14.5	904.6	660.3	291.7	1.000212
9000.0	732.6	12.5	14.3	892.4	658.8	286.1	1.000208
9500.0	719.5	11.3	14.2	880.3	657.4	284.1	1.000205
10000.0	705.6	10.2	14.0	867.9	656.1	283.9	1.000202
10500.0	693.7	10.0	13.7	852.6	655.6	284.0	1.000198
11000.0	681.1	10.1	13.0	837.0	655.9	285.7	1.000194
11500.0	668.7	9.2	13.0	824.5	654.9		1.000191
12000.0	656.5	8.2	13.0	812.3	653.7		1.000188
12500.0	644.5	7.9	13.0	796.4	653.3		1.000184

STATION ALTITUDE 4051.37 FEET MSL
 2 JUNE 82 1208 MDX
 ASCENSION 110. 53

MANDATORY LEVELS
 153016005J
 LC-37

GEODETIC COORDINATES
 32.40175 LAT DEG
 106.31232 LON DEG

TABLE-11

PRESSURE GEOPOTENTIAL MILLIBARS	FEET	TEMPERATURE		REL. HUMIDITY PERCENT	WIND DATA	
		AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION (DEGREES)TN	SPEED KNOTS
850.0	4836.	23.9	-5.2	14.	274.0	0.5
800.0	6555.	18.9	-8.5	15.	277.9	10.2
750.0	8353.	14.1	-12.4	13.	293.3	8.8
700.0	10244.	9.9	-16.3	14.	284.3	23.5
650.0	12258.	7.9	-18.8	13.		

GEODLTIC COORDINATES
 52.40043 LAT DEG
 106.37033 LON DEG

SIGNIFICANT LEVEL DATA
 1530020246
 WHITE SANDS
 TABLE-12

STATION ALTITUDE 3989.00 FEET MSL
 2 JUNE 82 1240 MDT
 ASCENSION NO. 248

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	RFL. HUM. PERCENT
875.8	3989.0	29.5	-5.3
865.8	4322.3	26.3	.1
850.0	4853.7	25.8	-1.1
789.4	6966.2	20.3	-4.0
733.6	9015.2	13.3	-9.8
709.0	10301.7	9.9	-13.3
679.2	11121.9	8.2	-15.4
670.1	11488.4	9.5	-14.3
635.3	12932.4	6.2	-17.0
609.3	14056.0	5.6	-17.5
517.7	18357.8	-3.9	-26.0
500.0	19259.4	-4.5	-26.5
477.9	20425.0	-6.8	-23.9
454.3	21717.5	-10.1	-23.3
432.1	22979.2	-13.8	-28.7
424.5	23422.0	-14.9	-26.0
409.9	24289.9	-17.1	-22.4
400.0	24892.3	-18.3	-24.5
			10.0
			18.0
			17.0
			19.0
			19.0
			18.0
			17.0
			17.0
			17.0
			16.0
			16.0
			24.0
			33.0
			27.0
			38.0
			63.0
			58.0

STATION ALTITUDE 3489.60 FEET MSL
2 JUNE 82 1240 MDT
ASCENSION NO. 248

UPPER AIR DATA
1530020240
WHITE SANDS
TABLE-13

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (111) SPEED (111) KNOTS	INDEX OF REFRACTION
3989.0	875.8	29.5	10.0	1000.3	678.3	240.0	1.000241
4000.0	875.5	29.4	10.3	1000.2	678.2	240.2	1.000242
4500.0	860.5	26.1	17.7	999.0	674.6	230.1	1.000248
5000.0	845.7	25.4	17.1	984.2	674.0	239.7	1.000243
5500.0	831.0	24.1	17.6	971.3	672.5	238.3	1.000239
6000.0	810.6	22.8	18.1	956.9	671.0	236.3	1.000235
6500.0	802.4	21.5	18.6	946.3	669.5	235.0	1.000232
7000.0	786.4	20.2	19.0	934.3	668.0	234.0	1.000228
7500.0	774.5	18.5	19.0	923.3	665.9	230.9	1.000224
8000.0	760.7	16.8	19.0	912.3	663.9	226.0	1.000220
8500.0	747.2	15.1	19.0	901.7	661.9	222.0	1.000216
9000.0	734.0	13.4	19.0	891.2	659.9	223.0	1.000212
9500.0	720.8	12.0	18.6	879.3	658.3	224.2	1.000208
10000.0	707.7	10.7	18.2	867.5	656.8	226.9	1.000204
10500.0	694.9	9.5	17.8	855.3	655.3	229.3	1.000201
11000.0	682.3	8.5	17.1	843.1	654.1	231.3	1.000197
11500.0	669.8	9.5	17.0	824.7	653.3	233.2	1.000193
12000.0	657.6	8.3	17.0	812.9	654.0	233.0	1.000190
12500.0	645.5	7.2	17.0	801.4	652.6	232.4	1.000187
13000.0	633.7	6.2	17.0	789.6	651.4	230.2	1.000184
13500.0	622.0	5.9	17.0	775.8	651.1	228.0	1.000180
14000.0	610.6	5.6	17.0	762.2	650.8	227.0	1.000177
14500.0	599.1	4.6	16.9	750.7	649.6	229.3	1.000174
15000.0	587.9	3.5	16.8	739.6	648.3	227.1	1.000171
15500.0	576.9	2.4	16.7	728.7	647.0	225.4	1.000168
16000.0	566.1	1.3	16.5	718.0	645.0	223.0	1.000166
16500.0	555.4	.2	16.4	707.4	644.3	225.1	1.000163
17000.0	545.0	-9	16.3	696.9	643.0	223.2	1.000160
17500.0	534.8	-2.0	16.2	686.7	641.7	222.4	1.000157
18000.0	524.8	-3.1	16.1	676.0	640.4	222.3	1.000155
18500.0	514.9	-4.0	16.0	666.0	639.2	224.4	1.000152
19000.0	505.0	-4.3	16.0	654.1	638.9	226.9	1.000149
19500.0	495.4	-5.0	17.7	643.1	638.2	226.0	1.000147
20000.0	485.8	-6.0	21.1	633.0	637.0	228.7	1.000145
20500.0	476.5	-7.0	24.5	623.2	635.8	228.3	1.000144
21000.0	467.3	-8.3	28.0	614.1	634.3	226.0	1.000142
21500.0	458.2	-9.5	31.5	605.0	632.8	227.3	1.000140
22000.0	449.2	-10.9	24.5	596.4	631.1	227.2	1.000137
22500.0	440.4	-12.4	29.3	588.0	629.3	227.1	1.000135
23000.0	431.7	-13.9	27.5	579.7	627.5	227.3	1.000132

STATION ALTITUDE 3989.00 FEET SL
 2 JUNE 62 1240 MMT
 ASCENSION NO. 248
 UPPER AIR DATA
 1530020246
 WHITE SANDS
 TABLE-13 cont'd
 GEODETIC COORDINATES
 32.40043 LAT DEG
 106.57033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (IN)	SPEED KNOTS	INDEX OF REFRACTION
23500.0	425.2	-15.1	40.2	570.9	625.0	209.1	62.0	1.000131
24000.0	414.7	-16.4	54.6	562.2	624.5			1.000131
24500.0	406.4	-17.5	61.3	553.4	623.2			1.000129

STATION ALTITUDE 3489.00 FEET MSL
2 JUNE 62 1240 MDT
ASCENSION NO. 248

MANDATORY LEVELS
1530020248
WHITE SANDS

GEODETIAC COORDINATES
32.40043 LAT DEG
106.57033 LON DEG

TABLE-14

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUMIDITY PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES (TN)	SPEED KNOTS
850.0	4850.	25.8	-1.1	17.	250.9	0.1
800.0	6583.	21.3	-3.5	19.	284.0	10.2
750.0	8395.	15.4	-8.1	19.	273.4	9.9
700.0	10292.	9.9	-13.3	18.	276.6	20.5
650.0	12302.	7.6	-15.6	17.	282.7	27.8
600.0	14451.	4.7	-18.3	17.	269.0	26.3
550.0	16755.	-4.4	-22.8	10.	264.1	34.2
500.0	19232.	-4.5	-26.5	16.	267.0	50.6
450.0	21924.	-10.8	-24.3	32.	267.1	60.4
400.0	24850.	-18.3	-24.5	58.		

STATION ALTITUDE 4051.37 FEET MSL
 2 JUNE 62
 ASCENSION NO. 55

SIGNIFICANT LEVEL DATA
 1530160055
 LC-37

GEODLTIC COORDINATES
 32.40175 LAT DEG
 106.31232 LON DEG

TABLE-15

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		H.P.L. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
871.9 4051.4	31.2	13.5	34.0
850.0 4795.8	28.0	1.5	18.0
764.0 7047.3	18.9	-5.2	19.0
717.4 9603.9	13.9	-10.0	18.0
700.0 10281.6	12.6	-11.1	18.0
673.0 11360.5	10.3	-12.9	18.0
655.8 12066.4	9.2	-13.8	18.0
630.2 13145.8	7.1	-15.6	18.0

STATION ALTITUDE 4051.37 FEET MSL
2 JUNE 82 1440 MDT
ASCENSION I.O. 55

UPPER AIR DATA
1530160000

LC-37

TABLE-16

GEODETIC COORDINATES
32.40175 LAT DEG
106.51232 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND METERS PER SECOND	WIND DATA DIRECTION (TYP) SPEED KNOTS	INDEX OF REFRACTION
4051.4	871.9	31.2	34.0	991.3	681.9	210.0	1.000284
4500.0	855.6	29.3	24.4	984.8	679.0	224.0	1.000261
5000.0	844.0	27.4	18.1	975.4	676.4	237.7	1.000245
5500.0	829.3	25.9	18.2	963.4	674.6	247.3	1.000241
6000.0	815.0	24.4	18.4	951.6	672.9	254.7	1.000236
6500.0	800.8	22.9	18.6	940.0	671.2	260.1	1.000232
7000.0	787.0	21.4	18.7	928.5	669.4	264.2	1.000228
7500.0	773.3	19.9	18.9	917.2	667.7	263.0	1.000224
8000.0	759.8	18.5	18.9	905.9	665.9	260.4	1.000220
8500.0	746.3	17.0	18.6	894.3	664.3	256.7	1.000216
9000.0	733.1	15.6	18.3	882.9	662.6	250.1	1.000211
9500.0	720.1	14.2	18.1	871.7	660.9	261.7	1.000208
10000.0	707.2	13.1	18.0	859.3	659.6	263.3	1.000204
10500.0	694.4	12.1	18.0	846.8	658.5	265.9	1.000201
11000.0	681.9	11.1	18.0	834.7	657.2	272.1	1.000197
11500.0	669.6	10.1	18.0	822.5	656.1		1.000194
12000.0	657.4	9.3	18.0	809.8	655.1		1.000190
12500.0	645.4	8.4	18.0	797.8	654.0		1.000187
13000.0	633.6	7.4	18.0	785.9	652.9		1.000184

STATION ALTITUDE 4651.37 FEET MSL
 2 JUNE 62 1440 MDT
 ASCENSION NO. 55

MANDATORY LEVELS
 153016005J
 LC-37
 TABLE-17

GEODETIC COORDINATES
 32.40175 LAT DEG
 106.31232 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		*IND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE	PERCENT		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4792.	28.0	1.5	18.		252.7	7.0
800.0	6536.	22.8	-2.3	19.		260.4	11.7
750.0	8359.	17.4	-6.6	19.		258.0	14.6
700.0	10271.	12.6	-11.1	16.		264.4	14.4
650.0	12295.	8.7	-14.2	18.			

